Project Connections Buprenorphine Program

Program & Client Summary 2010-2017

Behavioral Health Leadership Institute

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Table of Contents

I. Overview of the Project Connections Buprenorphine Program

Opioid addiction and overdose have been incessant public health problems in Baltimore City, and many people who need and want help continue to experience barriers to enrolling and remaining in treatment. In June of 2010, the Behavioral Health Leadership Institute (BHLI) established the Project Connections Buprenorphine Program (PCBP) to fill this gap. The PCBP teams with local community partners to expand access to medication-assisted treatment for adults living with opioid addiction. Individuals are engaged in buprenorphine treatment and guided through an initiation and stabilization process with the support of a clinical team, peer-recovery groups led by experienced coaches, and additional supportive services. The PCBP aims to transition individuals who are stable in the program to buprenorphine maintenance treatment in a primary care setting. As a flexible program, the PCBP easily integrates into existent recovery, healthcare, or other settings where there is a need for buprenorphine treatment, adapting procedures based on the particular setting and needs of the client population. Maintaining a harm-reduction perspective, the goal of the program is to support clients to achieve successful outcomes including long-term recovery from addiction, wellness and the realization of hope.

A. Treatment Sites in Operation Fall 2016- Fall 2017

Project Connections at Dee's Place (DP)

The PCBP was originally established in 2010 in collaboration with the community partner Dee's Place (DP), an open-door recovery center located in East Baltimore. DP assists people seeking help with recovery by hosting 12-step and other peer recovery meetings, referring individuals to substance use treatment programs, and helping them attain other needed health and social services. The PCBP continues to operate and serve clients at DP weekly, and works together with DP staff to offer comprehensive clinical support in an environment where peer-recovery and other supports are readily available.

Project Connections at Recovery in Community /Next Passages (RNP)

The second PCBP site was originally established in 2011 at the community-based substance use treatment center Recovery In Community (RIC) in West Baltimore. This center offered educational groups, relapse prevention, group and individual counseling, among other supportive services. Due to administrative changes in the fall of 2016, RIC closed but the PCBP program moved its services and clients to an affiliated location associated with Bon Secours's Next Passages program. At the site, now referred to as Recovery In Community at Next Passages or "RNP," the PCBP continues to operate weekly and offer clinical and peer-support services.

Project Connections at A Step Forward (ASF)

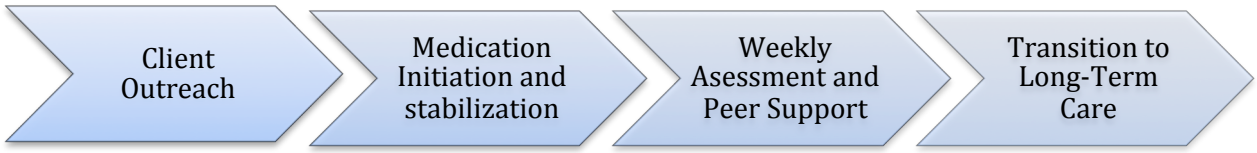
PCBP operated for one year at A Step Forward (ASF), a residential substance use treatment program in West Baltimore. ASF provides a substance-free living environment for its residents in recovery, while supporting them with additional clinical and support services

such as legal support and job-readiness training programs. PCBP services at ASF were terminated in February of 2017 due to operational and clinical issues at ASF unrelated to the PCBP program. Some of the clients were transferred to the RNP site. Nevertheless, during the time PCBP operated at ASF, results demonstrated this program model could be successfully integrated into a substance use recovery-housing program.

B. PCBP Team

The PCBP team generally consists of administrative staff from BHLI, peer counselors from each treatment site, and a mobile clinical team comprised of a physician, a nurse, and social worker, all with expertise in motivational interviewing and addiction treatment who attend each treatment site once per week. PCBP takes an individualized and harm reduction approach in that the team works through each client's individual struggles with recovery. To enroll and remain in the program, clients are expected to actively follow clinical instructions to assure safe use of buprenorphine. Clients are also often encouraged or required to participate in supplemental peer-recovery groups and other services as deemed necessary by each treatment site. Throughout the treatment process, program staff and the clinical team work to help clients manage needs and meet program goals. Program capacity is up to 18 people at a time at each site, with typically a maximum of two intakes per week.

C. Program Flow Overview



Step 1: Client Outreach

Peer support and partner site staff are often involved in community engagement and education about the program and for inviting clients who are interested and ready to engage in the program.

Step 2: Medication Initiation and Stabilization

New clients initially see the Nurse for an intake assessment and to review program expectations, procedures and values. Client then meets with the doctor and receives a first dose or prescription of buprenorphine. Client attends any support or recovery meetings that occur during this day.

Step 3: Weekly Assessment and Peer Support

Once a week thereafter, each client provides an observed drug test and meets with doctor, nurse, and other site staff (such as a social worker) when available and/or

requested. Client also attends recovery or program meetings, or an education group. On this day, the client can review procedures or discuss any questions, problems or concerns with the staff. If client is experiencing any problems or is struggling with program requirements, they review options and develop special support plans with the clinical team.

Step 4: Discharge and Transition

When a client achieves stability with buprenorphine, they are **transitioned** to on-going primary care provider who will continue medication maintenance and who will also be able to provide primary and other health care offerings. This is the goal of PCBP for every client. For those who have successfully transitioned, all are welcome to remain engaged with program activities and are encouraged to play an active role as alumni. If it is determined by the clinical team that a client is in need of a different type of treatment program, staff will assist the client in **transferring** to the appropriate program. In cases where client is not able to continue the program due to repeatedly failing to come in for weekly assessments or failing to comply with program requirements despite repeated attempts, or engaging in behavior that is deemed unsafe while taking buprenorphine, the clinical team may **terminate** a client from the program. If a client desires to return to the program after termination, they may re-enroll in the program at a later point.

II. Program News and Highlights

A. Expansion of PCBP Treatment Sites

The PCBP had an exciting and busy year in 2016 and into 2017, with many changes and strides to fill new gaps in behavioral health services in Baltimore City. Although the PCBP site at A Step Forward closed, BHLI is in the midst of launching two brand new treatment sites that will serve high-need populations in the city that are often disconnected from care.

The first new site is Project Connections at Re-Entry (PCARE), which will operate as a mobile treatment van directly outside the Baltimore Jail four mornings per week. The program will serve clients who are released from jail and who are interested in opioid addiction treatment and other behavioral health care services. Eligible individuals can initiate buprenorphine treatment directly on the van by obtaining a prescription, or can be referred to another Project Connections or partner location. Having engaged in a partnership and trainings with leaders and staff members of the local Baltimore Jail, BHLI will begin educating and engaging with interested persons behind the bars so that those eligible for services can initiate treatment immediately after discharge. PCARE will reach high-risk who may not otherwise have access to behavioral health care services. BHLI will be collaborating with Friends Research Institute to evaluate this pilot and study whether the model may also have a positive influence on recidivism.

The second new site is Project Connections at SPARC (PCSPARC), which will operate at a Johns Hopkins-sponsored site that is to serve as a safe space and health center for female

sex workers in Baltimore City. The new site, "Sex workers Promoting Action, Risk reduction, and Community mobilization (SPARC)", will offer a range of services for women in need, ranging from healthcare to counseling to childcare and case management. PCBP will operate at this site weekly and will be open for women who are interested in and eligible for buprenorphine treatment and referral to other behavioral healthcare but who may not otherwise have access to these services. The PCBP team will work together with peers and a case management team at SPARC to help support clients' needs.

B. Research and Data Management

BHLI has continued to work on research projects to evaluate and improve the rigor of its programs. In October of 2016, BHLI received an Urban Health Institute Small Grant Award in collaboration with students at the Johns Hopkins School of Public Health to perform a qualitative study to evaluate benefits and challenges to retention experienced by clients of the PCBP at Dee's Place. This study, called "*Opportunities and challenges on the road to recovery: a qualitative study exploring attitudes and experiences of clients in a community-based opioid treatment program in Baltimore City*," resulted in a report that was used to improve the PCBP protocol at Dee's Place, as well as in two research manuscripts currently in progress. BHLI has also continued to work to spread the word on the "Ability Inspiration and Motivation" (AIM) group model designed to de-stigmatize use of medication assisted treatment in peer-support groups. The study that describes the curriculum, "*Overcoming medication stigma in peer recovery: a new paradigm*" was presented at the 2017 American Public Health Association Conference and has been accepted for publication in the Substance Abuse journal.

To facilitate patient care and data management, BHLI is also moving towards an electronic record system that will centralize and store program databases in a secure online network. To do this, BHLI will utilize REDCap, a trustworthy Research Electronic Data Capture system for building and managing online surveys and databases.

C. In the News

BHLI's programs have once again received media attention to spread awareness and advocacy about behavioral health issues in Baltimore City. Most recently, this was through an article published in November in the Baltimore Sun, called "*Time to turn some prisons into hospitals*" that describes the new PCARE mobile treatment van at the Baltimore Jail.

http://www.baltimoresun.com/news/maryland/dan-rodricks-blog/bs-md-rodricks-1101-story.html

D. Fundraising and Organization Development

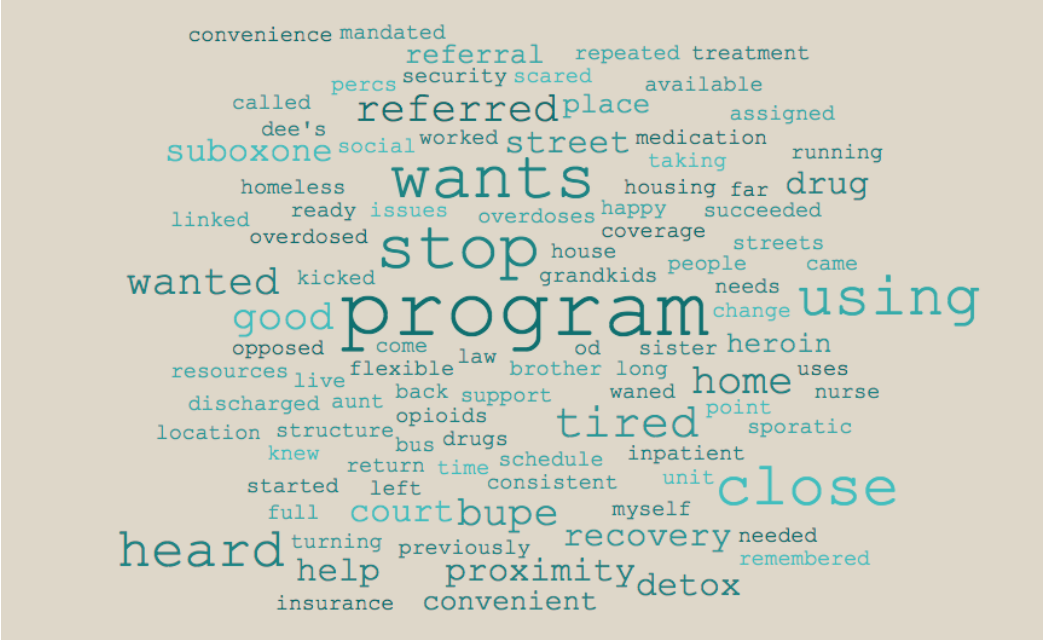
Lastly, BHLI has teamed with *Flipcause*, an organization that will provide logistical support to facilitate fundraising in support of expansion and strengthening of current programs.

III. Client Characteristics

Since the PCBP was initiated in 2010, it has served a total of 608 clients: 374 at Dee's Place (DP), 15 of which were readmissions, 203 at Recovery in Community/Next Passage (RNP), 6 of which were readmissions, and 31 at A Step Forward (ASF), which closed down in February of 2017. During the making of this report, a total of 36 clients were currently active: 15 at Dee's place and 21 at RNP. All information on client characteristics were collected at intake and are based on self report. Length of treatment and reasons for discharge were assessed at discharge. This report includes information for clients who enrolled into the PCBP up to and including September 13th, 2017.

A. Motivation for Enrollment in the PCBP

There is a range of reasons for which clients seek and arrive at PCBP for care. The following word cloud contains a summary of the 100 most common words cited at intake when clients are asked about why they chose the PCBP for treatment:



B. Sociodemographic Characteristics

Sociodemographic characteristics of participants of the PCBP at time of intake are presented in Table 1. Clients' ages ranged between 16 and 85, with a median and mean age of 50 (Standard Deviation (SD): 10.3 years). The majority of clients were male (62%) and African-American (86%). Most clients lived with family or friends (51%) and were unemployed (69%). Most clients held Primary Adult Care insurance (34%) or Medicaid (31%), but after the implementation of the Affordable Care Act in January 2015, all who were covered under Primary Adult Care were transferred to Medicaid. Moreover, the majority of clients were referred to the program by peers at the recovery center in which the program took place (60%). Most clients (83%) reported having some type of Criminal

Justice System involvement either currently or in the past. The distribution of all sociodemographic variables other than sex and employment status differed statistically between the three treatment sites, indicating that the sites cater to clients with somewhat variable demographics and circumstances and may therefore have different needs.

Table 1. Sociodemographic Characteristics of Clients Across Treatment Sites

	TOTAL	DP (N=333)	RNP (N=171)	ASF (26)	Chi² P-value
	n(%)	n(%)	n(%)	n(%)	
Mean Age [SD] (N=590)	50 [10.3]	51[9.4]	49[10.8]	39[11.0]	**<0.001**
Age Category (N=590)					**<0.001**
<35	59(10)	24(6)	21(10)	14(45)	
35-44	77(13)	42(11)	32(16)	3(10)	
45-54	257 (42)	163(44)	82(40)	12(39)	
55-64	159(26)	114(31)	44(22)	1(3)	
65+	56(9)	31(8)	24(12)	1(3)	
Sex (N=603)					0.718
Male	371(62)	229(61)	121(60)	21(68)	
Female	232(38)	142(38)	80(40)	10(32)	
Race (N=587)					**0.045**
African-American	503(86)	315(87)	167(86)	21(68)	
White	68(12)	36(10)	24(12)	8(26)	
Other	16(4)	10(3)	4(2)	2(6)	
Employment *(N=600)*					0.125
Unemployed	415(69)	240(65)	154(76)	21(70)	
Employed Part Time	33(6)	23(6)	10(5)	0	
Employed Full Time	34(6)	22(6)	11(5)	1(3)	
Disabled/Other	118(20)	83(23)	27(13)	8(27)	
Housing *(N=594)*					**<0.001**
Independent	143(24)	98(27)	43(22)	2(6)	
Family/friends	302(51)	213(59)	80(40)	9(29)	
Homeless	23(4)	18(5)	4(2)	1(3)	
Recovery house	76(13)	15(4)	43(22)	18(58)	
Transitional house	36(6)	14(4)	21(11)	1(3)	
Other	14(2)	6(2)	8(4)	0	
Insurance *(N=595)*					**<0.001**
Medicaid	183(31)	105(29)	56(28)	22(73)	
Medicare	63(11)	41(11)	19(10)	3(10)	
Primary Adult Care	204(34)	117(32)	87(44)	0	
Private	30(5)	13(4)	16(8)	1(3)	
Uninsured	97(16)	79(22)	15(8)	3(10)	
Medicaid & Medicare	9(2)	5(1)	3(2)	1(3)	
Other	9(2)	5(1)	4(2)	0	

Criminal Justice Involvement *(N=602)*					**<0.001**
None	102(17)	58(16)	38(19)	6(19)	
Current probation/parole	164(28)	62(20)	76 (37)	16(52)	
Other current legal issues	11(2)	8(2)	3(1)	0	
Past other legal issues	325(54)	230(63)	86(42)	9(29)	
Referral Source *(N=534)*					**0.011**
Self	21(4)	15(5)	5(3)	1(3)	
Recovery center	320(60)	182(57)	114(62)	24(77)	
Criminal justice system	8(2)	2(1)	5(3)	1(3)	
Care provider/clinic	34(6)	16(5)	17(9)	1(3)	
Family/friend	88(16)	55(17)	29(16)	4(13)	
Other	63(12)	50(16)	13(6)	0	

Notes:
[1](N) indicates number of participants for which information on each variable was available.
[2]Bolded P-values indicate statistically significant differences between treatment sites.
[3]Primary Adult Care clients were transferred to Medicaid in January of 2015.
[4]Variable column percentages may not add up to 100% due to rounding error.

C. Substance Use Characteristics and Treatment History

Available substance use information and treatment history of participants in the PCBP at intake are presented in Table 2. The average age of opioid initiation was 23 years and the average length of opioid use was 27 years. 62% of participants reported having a family member with a substance use problem, most of which were parents or siblings. Most clients (62%) indicated using opioids three or more times per day. Most participants (67%) primarily used opioids nasally, 10% of participants used opioids both nasally and intravenously and 17% mostly intravenously. 37% had reported ever injecting drugs, and 26% of participants reported ever having overdosed. 77% of participants knew of naloxone for overdose reversal, but only 15% had ever used it (1 participant indicated using it 7 times). A majority (91%) of participants had some prior treatment for substance use, most commonly which was detox (66%) followed by buprenorphine (53%). The variables that differed statistically between sites were age and length of opioid use, mode of use and whether clients had received some other type of substance use treatment other than detox, buprenorphine, or methadone treatment.

Table 2. Substance Use and Treatment Characteristics Across Treatment Sites

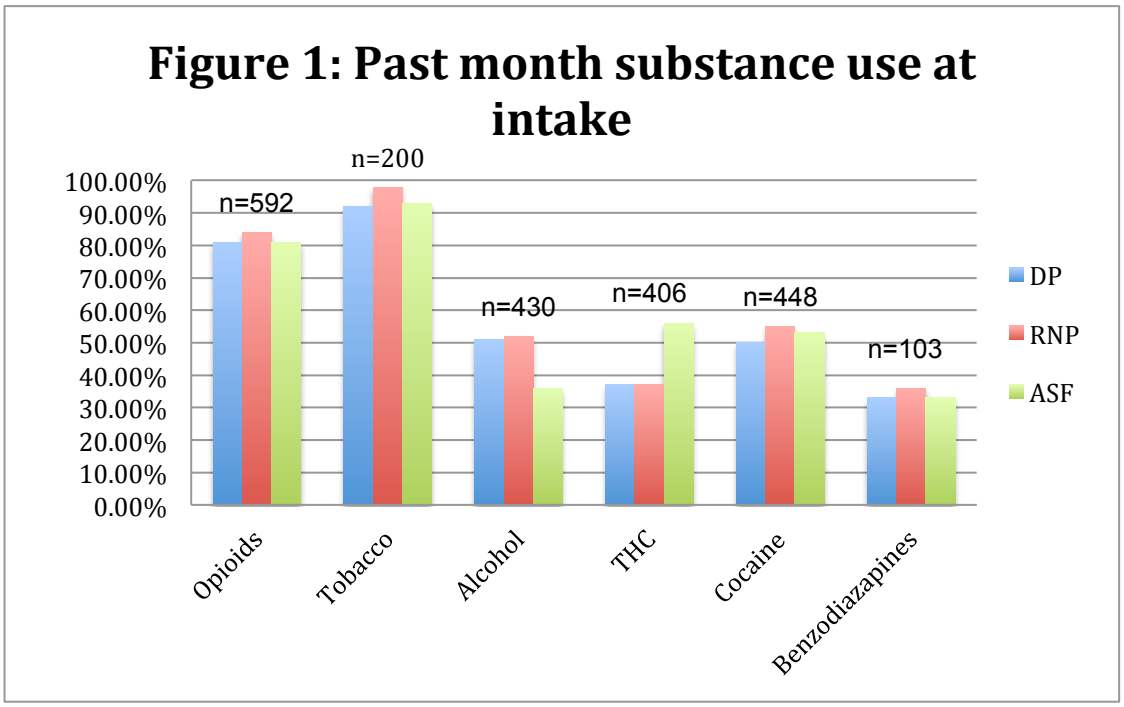
	TOTAL	DP (N=333)	RNP (N=171)	ASF (N=26)	Chi² P-value
	n(%)	**n(%)**	**n(%)**	**n(%)**	
Substance Use Characteristics					
Mean Age of Opioid Initiation [SD] *(N=590)*	23[8]	23[9]	22[7]	22[7]	**<0.001**
Mean # of Years Since Opioid Initiation [SD] *(N=566)*	27(11)	28(10)	27(11)]	16[12]	**<0.001**

Primary Opioid Type (N=76) Heroin Other Opioids Both	 47(61) 10(13) 19(25)	 27(69) 2(81) 9(23)	 17(61) 4(14) 7(25)	 3(33) 3(33) 3(33)	0.236
Have Family Member with Substance Use Problem (N=459)	284(62)	151(61)	117(65)	16(52)	0.363
Primary Mode of Use *(N=245)*					**<0.05**
Smoke	3(1)	3(2)	0.00	0.00	
Oral	12(5)	1(1)	5(6)	6(19)	
Nasal	164(67)	106(78)	46(59)	12(38)	
Inject	41(17)	15(11)	18(23)	8(26)	
Nasal & inject	25(10)	11(8)	9(12)	5(16)	
Ever Injection Drug Use *(N=598)*	219(37)	124(34)	82(41)	13(42)	0.215
Ever Overdose *(N=470)*	120(26)	62(25)	50(36)	8(26)	0.885
Knew of Naloxone (*N=78****)***	60(77)	34(85)	20(69)	6(67)	0.219
Substance Use Treatment					
Any Prior Treatment *(N=600)*	548(91)	331(90)	189(95)	28(90)	0.148
Prior Buprenorphine *(N=589)*	312(53)	182(51)	112(56)	13(58)	0.378
Prior Methadone *(N=588)*	*206(35)*	*124(34)*	*72(37)*	10(32)	0.807
Prior Detox *(N=588)*	390(66)	238(67)	133(67)	19(63)	0.939
Prior Other Substance Use Treatment *(N=564)*	228(40)	110(51)	97(51)	21(68)	**<0.001**

Notes:
[1] (N) indicates number of participants for which information on each variable was available.
[2]Bolded p-values indicate statistically significant differences between treatment sites.
[3]Variable column percentages may not add up to 100% due to rounding error.

D. Poly-Substance Use

Most participants indicated using at least one substance other than opioids in the past month before intake. *Figure 1* depicts the proportion of clients reporting past month use of select substances at intake at each site. 82% of participants reported using opioids in the month before starting the program. Use of other substances was highest at all sites for tobacco (average 95%) followed by cocaine (average 55%) and alcohol (average 50%). When asked about daily use, 87% of opioid users, 93% of tobacco users, 22% of alcohol users, 43% of cocaine users, 26% of marijuana users, and 35% of benzodiazepine users indicated using each respective substance on most days.



Note: (n) indicates number of participants that provided information about post-month use of this substance

E. Medical History and Health Service Utilization

Information on participants' medical history and health service utilization at intake is presented in Table 3. 8% of clients were HIV positive, while 3% did not know their HIV status. 22% of clients were HCV positive, while 7% did not know their HCV status. 58% of clients reported having been diagnosed with a co-occurring chronic illness, most commonly hypertension and other cardiovascular problems, diabetes, asthma, arthritis and chronic back pain. 52% reported having been specifically diagnosed with a mental illness, most commonly major depression, bipolar disorder, or anxiety disorders. 63% of clients indicated having a primary care doctor, but 79% indicated having visited a primary care physician in the past year. 43% of clients also reported having attended an emergency room in the past year. Of these, 36% said their visit was related to a mental health or substance use problem. 27% of clients reported having been hospitalized in the past year. Of these, 48% indicated the hospitalization was related to a mental heath or substance use problem. 44% reported that they had received some kind of mental health treatment in their lifetime and 34% said they were currently receiving mental health care at the time of intake. The variables that differed significantly between sites were the percentage of clients that had a comorbid mental illness, the percentage that had ever received mental health treatment and the percentage that had visited and emergency room in the past year.

Table 3. Medical History and Health Service Use Characteristics Across Treatment Sites

	TOTAL	DP (N=333)	RNP (N=171)	ASF (N=26)	Chi2 P-value
	n(%)	n(%)	n(%)	n(%)	
Medical History					
HIV Status *(N=592)*					0.440
HIV-	531(90)	326(90)	177(90)	28(90)	
HIV+	46(8)	28(8)	17(9)	1(3)	
Unknown	15(3)	10(3)	3(2)	2(6)	
HCV Status *(N=591)*					0.281
HCV-	417(71)	258(71)	141(72)	18(58)	
HCV+	131(22)	79(22)	44(22)	8(26)	
Unknown	43(7)	27(7)	11(6)	5(16)	
Comorbid Chronic Illness *(N=588)*	342(58)	213(59)	111(57)	18(58)	0.864
Comorbid Mental illness *(N=592)*	305(52)	174(48)	107(54)	24(77)	**<0.05**
Health Service Utilization					
Has Primary Care Physician *(N=545)*	341(63)	207(63)	121(65)	13(42)	0.127
Past Year ER *(N=531)*	228(43)	116(38)	93(47)	19(61)	**<0.05**
Past Year Hosp. *(N=454)*	147(27)	88(29)	52(26)	7(23)	0.714
Lifetime Mental Health Treatment *(N=556)*	243(44)	140(41)	79(43)	24(77)	**<0.05**
Current Mental Health Treatment *(N=233)*	79(34)	43(33)	28(37)	7(28)	0.737

Notes:
[1] (N) indicates number of participants for which information on each variable was available.
[2]Bolden P-values indicate statistically significant differences between treatment sites.
[3]Variable column percentages may not add up to 100% due to rounding error.

IV. Program Outcomes 2010-2016

A. Client Discharge Status

Of the 608 clients who enrolled in the PCBP since 2010, 36(6%) are currently still active in the program, 162 (27%) were successfully transitioned to continuing buprenorphine care with a primary care doctor, 47 (8%) were transferred to a higher level of care, 10 were incarcerated (2%), 18 (3%) left the program due to reasons such as moving away or administrative site closing, and 337 (55%) left the program due to non-compliance or other reasons detailed in the following section.

B. Length of Treatment

Overall, participants who entered the program stayed in treatment for an average of 12 weeks and a median of 7 weeks. Among those who were successfully transitioned, clients' length of treatment ranged from 1 to 84 weeks, with a median of 19 weeks and an average of 22 weeks. Among those who were transferred to higher level of care, clients' length of treatment ranged from 1 to 56 weeks with a median of 7 weeks and an average of 10 weeks. Among those who were terminated from the program, clients' length of stay in the program ranged from 1 to 65 weeks with a median of 4 weeks and mean of 8 weeks. Table 4 presents client status and length of treatment information per site.

Table 4: Client Status and Discharge Type Across Treatment Sites

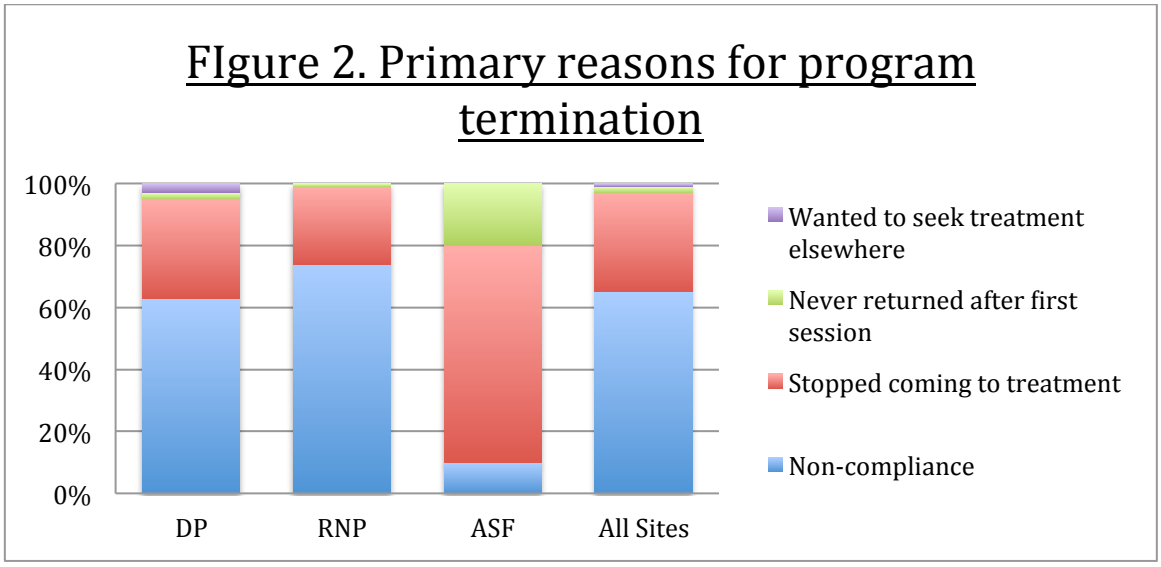
	TOTAL	DP (N=333)	RNP (N=171)	ASF (N=26)
	n(%)	**n(%)**	**n(%)**	**n(%)**
Current Status				
Active	36(6)	15(4)	21(10)	0*
Transitioned	162(27)	99(26)	59(29)	4(13)
Transferred	47(8)	32(9)	8(4)	13(42)
Terminated	337(55)	222(59)	102(50)	11(42)
Incarcerated	10(2)	6(2)	4(2)	0.00
Other	16(3)	0.00	9(4)	7(23)
Length of Time in Program				
Overall mean weeks in program [SD]	12[13]	13[14]	11[11]	11(10)
Median weeks in program by outcome				
Any outcome	7	7	7	8
Transitioned	19	20	17	30
Terminated	4	4	4	3
Transferred	7	8	5	14
Median weeks in program by age group				
<35	7	3	12	8
35-44	5	5	7	3
45-54	6	7	5	14
55-64	9	10	7	29
65+	15	16	15	4

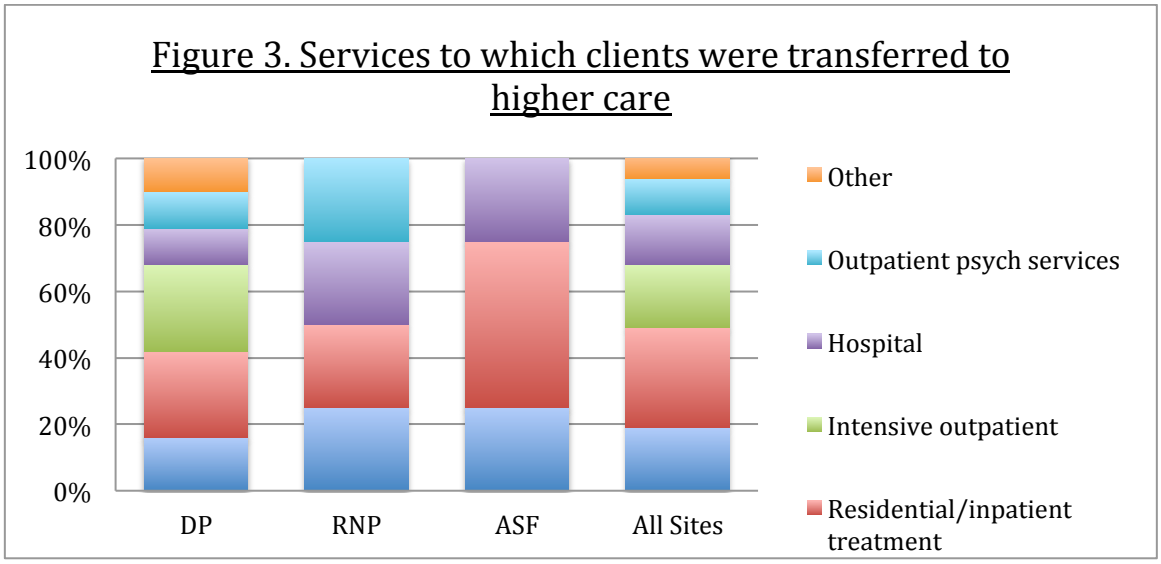
Note: Variable column percentages may not add up to 100% due to rounding error.

C. Reasons for Termination and Transfer

Given the low-barrier model of the PCBP and its mission to serve a population with complex needs, it is expected that many participants will not fully engage or complete the program to the transition phase on first attempt. To understand the primary reasons for

which clients are terminated from the program or transferred to higher level of care, discharge notes are recorded where possible. The leading reasons for program termination were non-compliance with program structure/expectations (60%) and client stopped coming to the program (37%). The primary programs to which clients were transferred for higher care were residential or inpatient treatment programs (27%), intensive outpatient treatment (14%) and detox (14%). The breakdown of reasons for termination and main programs of transfer for clients for whom information was available are respectively presented in Figures 2 and 3.





D. Associations with Treatment Length and Discharge Outcomes

Linear regression was used to measure the association between client characteristics and length of stay in the program. After adjusting for treatment site, having an older age, having had prior treatment and having a comorbid chronic health condition were all significantly associated with staying in the program for a longer period of weeks. Logistic regression was used to measure the association between available client characteristics and program outcomes. After adjusting for treatment site, the characteristics of having an older age, being uninsured, living in a recovery house, having shared needles in the past, and having a chronic physical health condition were all associated with higher probability of being successfully transitioned to ongoing care as opposed to terminated or transferred from the program. Characteristics that were found to be associated with risk of termination from treatment as opposed to transition were having had no prior treatment episodes, living independently, having some type of insurance at intake and never having shared needles. Associations were considered statistically significant when $p<0.05$. Future analyses and more in-depth exploration will be necessary to interpret these findings.

V. Report Summary and Conclusions

The Project Connections Buprenorphine Program aims to fill an existing service gap for the treatment of opioid addiction among a population in Baltimore City that has been largely disconnected from health care services. Since its initiation in 2010, the PCBP has served over 600 clients in its three community-based treatment sites. While clients represent a range of demographic characteristics and unique needs, many are in vulnerable circumstances with a majority being unemployed, living in unstable housing conditions, having a history of criminal justice involvement, experiencing several co-occurring physical and mental health conditions and having high rates of emergency care use. Most clients in the program are poly-substance users and long-term opioid users, with an average of 27 years of opioid use. The PCBP aims to overcome these challenges by working to engage clients into stable and long term buprenorphine treatment and connecting them with necessary primary care services that can continue to support them with buprenorphine in addition to addressing co-occurring physical and mental health needs. Thus far, the PCBP has managed to successfully transition nearly a third of its clients to ongoing primary care and continues to work with clients to achieve long-term recovery and wellbeing. Outcomes from this report and ongoing monitoring and evaluations will help strengthen the program and improve both substance use and other quality of life outcomes for clients.